

(12) UK Patent Application (19) GB (11) 2 241 206 (13) A
(43) Date of A publication 28.08.1991

(21) Application No 9004220.1

(22) Date of filing 24.02.1990

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(51) INT CL⁵
B60P 3/22, B62D 33/00

(52) UK CL (Edition K)
B7B BLB B316 B328

(56) Documents cited
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(58) Field of search
UK CL (Edition J) B7B BLB BLC BWL
INT CL⁴ B60P, B62D

(54) Dual purpose tank/platform vehicle

(57) A flatbed trailer has liquid carrying tanks 1 built into a structure underneath the trailer, extending from a point at the rear of the front end to approximately the rear of the trailer and beyond the rear wheels. The floor of the tank is level from front to rear. The floor level is lower than the centre line of the trailer wheels. An enclosed load carrying body 4 may be provided on the flat bed.

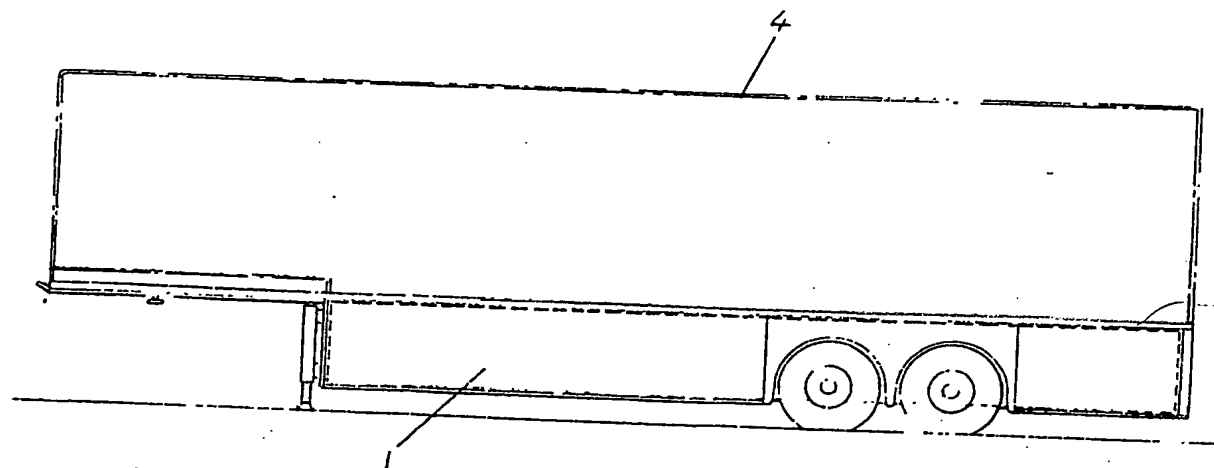


FIG 1

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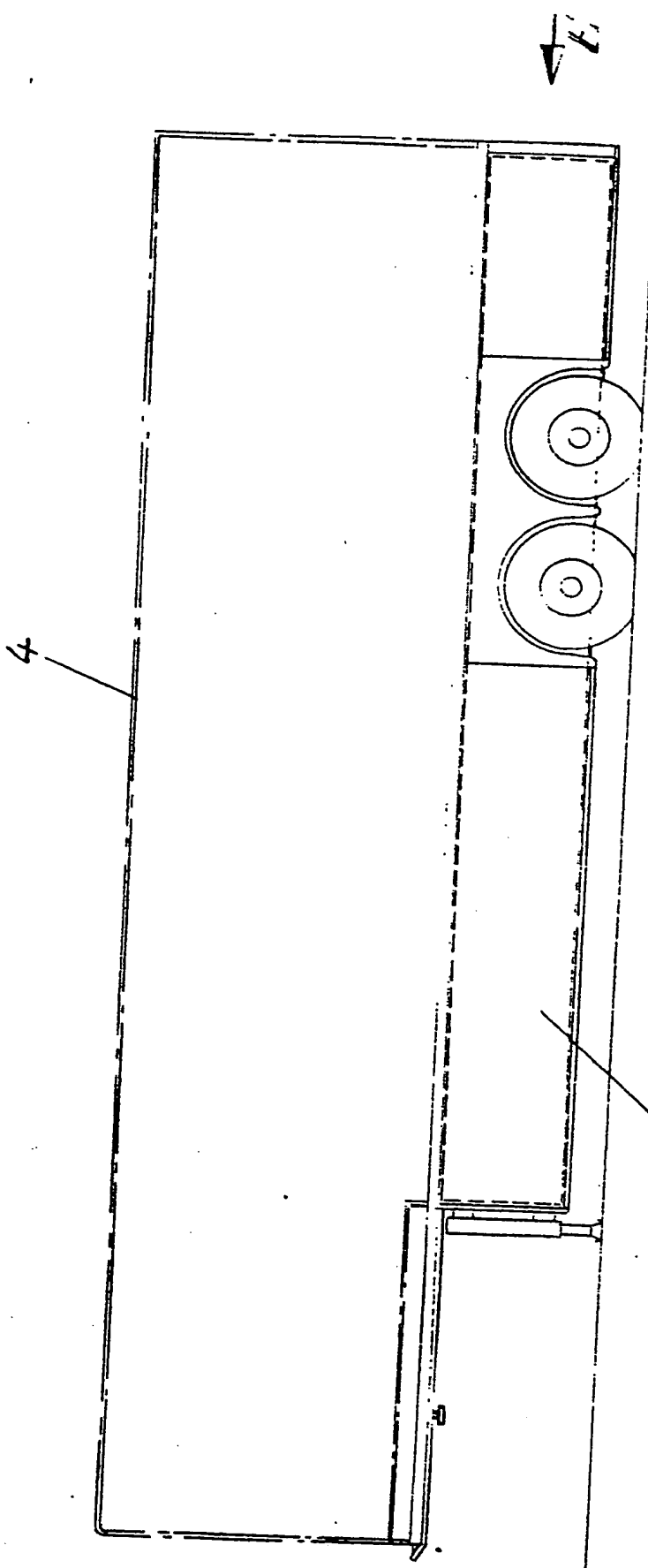
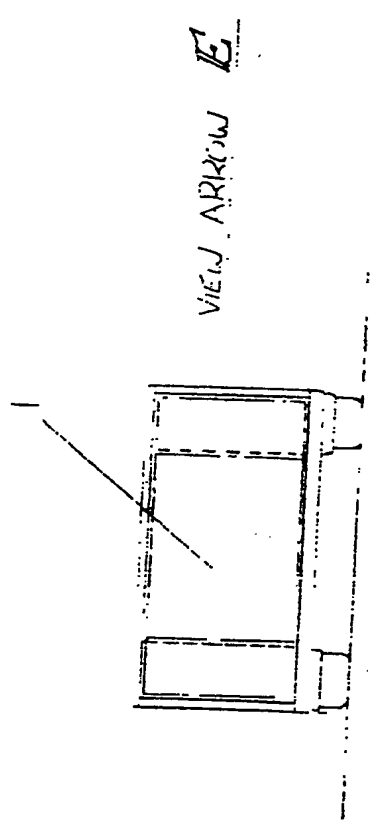
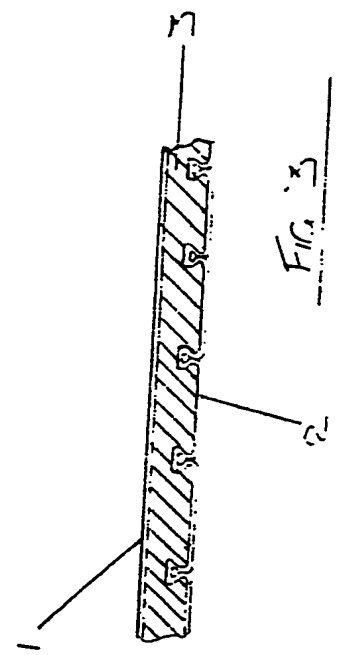
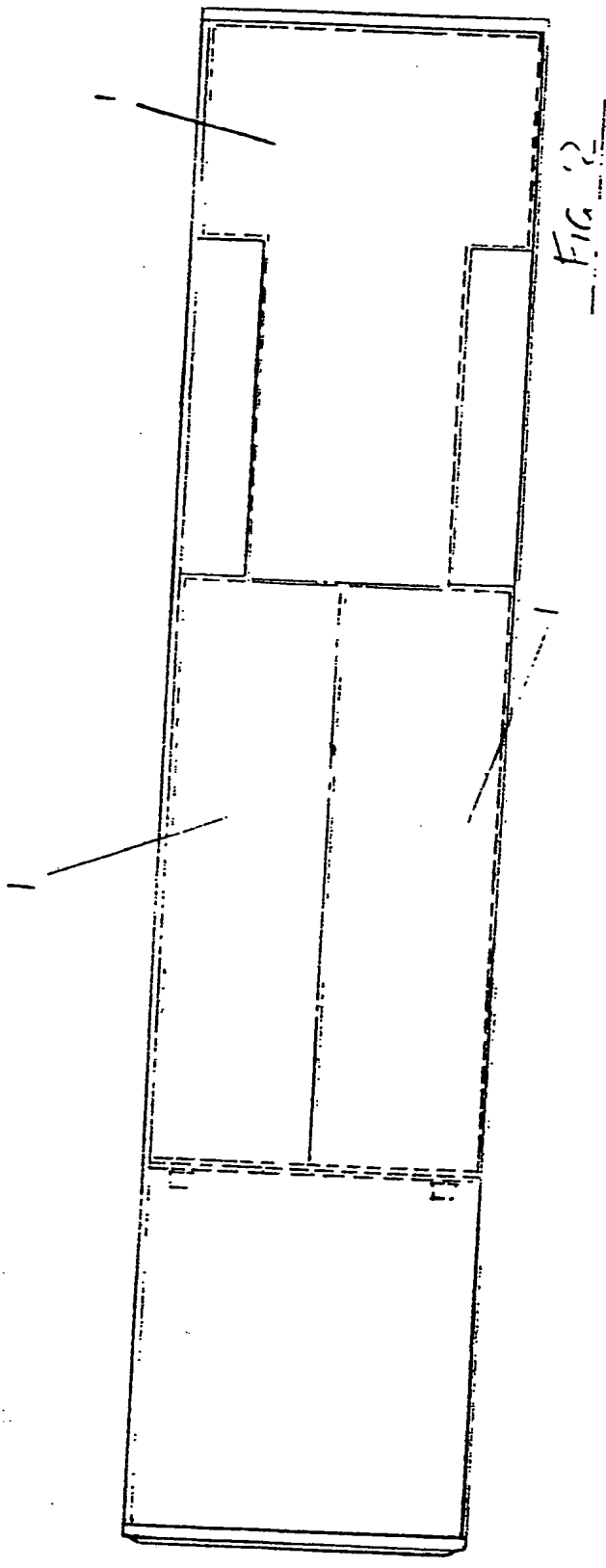


FIG 1



VIEW ARROW E



DUAL PURPOSE TANKER TRAILER

This invention relates to a dual purpose tanker/general cargo type trailer or either a drawbar or articulated type.

It is well known that liquid carrying tankers of the trailer type generally carry load in one direction but return empty.

According to the present invention there is provided a trailer with a floor height approximately similar to that of a conventional flat bed which may be used as a flat bed cargo carrying trailer.

Preferably the trailer should be flat bed but may be stepped.

A structure is fabricated underneath the floor into which is installed a tank so that the trailer may deliver a load of liquid and on the return trip may carry general cargo, or a combination of both improving the productivity of the vehicle.

Preferably the tank extends from a position towards the front end to approximately the rear end of the trailer and behind the rear wheels and close to the ground for maximum capacity.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawing in which:-

Fig. 1. Shows an elevation of a dual purpose trailer with supportive structure for liquid tank and the outline of the internal tank 1.

Fig. 2. Shows a plan view of the tank 1 within the trailer.

Fig. 3. Shows the cavity between the tank 1 and an outer skin 2.

The supporting structure underneath the trailer floor has preferably an outer skin 2 Fig. 3.

The tanks may be constructed from light weight materials, for example Stainless Steel of 2mm thick.

The dimensions of the tank are such that when installed in the supporting structure there is an air gap or cavity between the outer skin and the walls of the tank.

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To provide stability and to enable the tank to withstand impact or accidental damage, a filler 3 is provided preferably a material such as hard polyurethane is injected into the cavity in situ.

It is preferred that the tank should be as close to the ground as practicable. It is also preferable that the tank extends rearwards from the wheel position for optimum weight distribution.

Independent suspension for trailers is well known where a hub and wheel is attached to a beam which has a pivot point about which the beam can rotate.

This type of suspension allows the tank floor to be close to the ground and below the centre line of the wheel.

It is desirable that the tank should have a bottom which is approximately level so that all the contents can be readily drained from it, and that it may be drained from either the front or rear end.

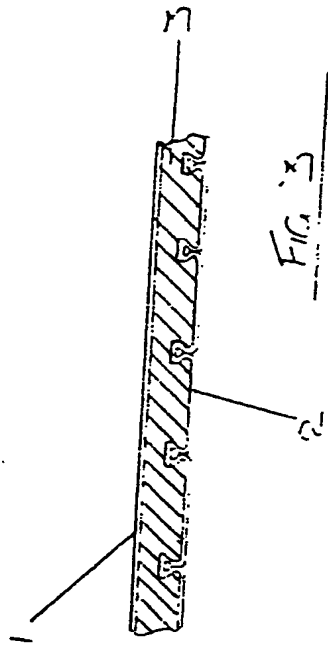
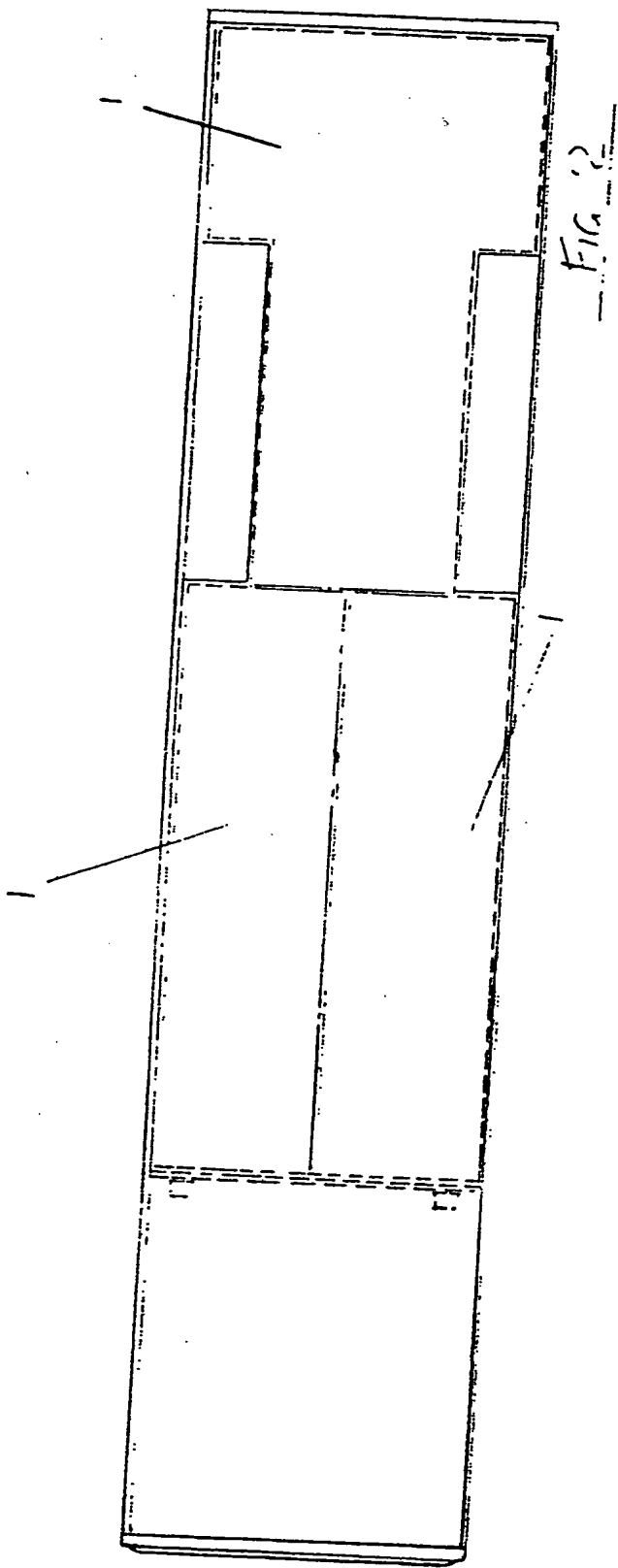
The tank maybe divided into separate compartments for carrying different types of liquids.

An enclosed body 4 constructed from rigid material or from Tarpaulin type material maybe built on to the upper floor surface.

CLAIMS

P.3.

1. A flat bed trailer with a structure underneath the floor to form a liquid carrying tank, the structure extending from a point rear of the front of a trailer, to approximately the rear of the trailer and at least rear of the rear wheels of a trailer.
2. A flat bed trailer as claimed in claim 1. wherein the floor of the tank in the area of the suspension is lower than the centre line of the rear wheels of the trailer.
3. A flat bed trailer as claimed in claims 1 and 2 wherein the structure includes an outer skin and an inner tank with an air gap or cavity between the outer skin and the tank wherein a load bearing foam is injected into the cavity or air gap.
4. A flat bed trailer as claimed in claims 1, 2, and 3 where the floor of the tank is approximately level from the front to the rear.
5. A trailer as claimed in claims, 1, 2, 3, 4, wherein the main floor of the trailer may be stepped.
6. A flat bed trailer as claimed in claims 1, 2, 3, 4 and 5, where an enclosed body is built on the upper surface of the flat bed floor.



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It is well known that liquid carrying tankers of the trailer type generally carry load in one direction but return empty.

According to the present invention there is provided a trailer with a floor height approximately similar to that of a conventional flat bed which may be used as a flat bed cargo carrying trailer.

Preferably the trailer should be flat bed but may be stepped.

A structure is fabricated underneath the floor into which is installed a tank so that the trailer may deliver a load of liquid and on the return trip may carry general cargo, or a combination of both improving the productivity of the vehicle.

Preferably the tank extends from a position towards the front end to approximately the rear end of the trailer and behind the rear wheels and close to the ground for maximum capacity.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawing in which:-

Fig. 1. Shows an elevation of a dual purpose trailer with supportive structure for liquid tank and the outline of the internal tank 1.

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The tanks may be constructed from light weight materials, for example Stainless Steel of 2mm thick.

The dimensions of the tank are such that when installed in the supporting structure there is an air gap or cavity between the outer skin and the walls of the tank. ✓

To provide stability and to enable the tank to withstand impact or accidental damage, a filler 3 is provided preferably a material such as hard polyurethane is injected into the cavity in situ.

It is preferred that the tank should be as close to the ground as practicable. It is also preferable that the tank extends rearwards from the wheel position for optimum weight distribution.

Independent suspension for trailers is well known where a hub and wheel is attached to a beam which has a pivot point about which the beam can rotate.

This type of suspension allows the tank floor to be close to the ground and below the centre line of the wheel.

It is desirable that the tank should have a bottom which is approximately level so that all the contents can be readily drained from it, and that it may be drained from either the front or rear end.

The tank maybe divided into separate compartments for carrying different types of liquids.

An enclosed body 4 constructed from rigid material or from Tarpaulin type material maybe built on to the upper floor surface.

CLAIMS

P.3.

1. A flat bed trailer with a structure underneath the floor to form a liquid carrying tank, the structure extending from a point rear of the front of a trailer, to approximately the rear of the trailer and at least rear of the rear wheels of a trailer.
2. A flat bed trailer as claimed in claim 1. wherein the floor of the tank in the area of the suspension is lower than the centre line of the rear wheels of the trailer.
3. A flat bed trailer as claimed in claims 1 and 2 wherein the structure includes an outer skin and an inner tank with an air gap or cavity between the outer skin and the tank wherein a load bearing foam is injected into the cavity or air gap.
4. A flat bed trailer as claimed in claims 1, 2, and 3 where the floor of the tank is approximately level from the front to the rear.
5. A trailer as claimed in claims, 1, 2, 3, 4, wherein the main floor of the trailer may be stepped.
6. A flat bed trailer as claimed in claims 1, 2, 3, 4 and 5, where an enclosed body is built on the upper surface of the flat bed floor.